

Work Order ID 80126-1

February-10-12 11:24:57 AM

\*80126\*

Page 1

Item ID: D4354-041

Accept

Revision ID:

Item Name: Bearpaw Wearplate Assembly

Start Date: 10/02/2012 Start Qty: 4.00

Required Date: 24/02/2012 Req'd Qty: 4.00

Reference:

Approvals: Process Plan: M.C.J

QC:

Date: 12/02/10 Tooling:

Date: SPC (Y/N):

\*N9000040100\*

Cust Item ID:

Customer:

Setup Start \*NS1\*

Stop \*NS2\*

Run Start \*NR1\*

Stop \*NR2\*

Sequence ID/  
Work Center ID

Operation  
Description

Set Up/  
Run Hours

Tool ID

Tool #

Plan  
Code

Accept  
Qty

Reject  
Qty

Reject  
Number

Insp.  
Stamp

Draw Nbr

Revision Nbr

D4354

b

100

\*100\*

Waterjet

FLOW CNC Waterjet

Memo

1-Cut as per Dwg (D4354-1)

Dwg Rev: B

Prog Rev: B

2-Deburr if necessary

0.00

0.00

12/02/15

4

110

\*110\*

QC

Quality Control

QC2- Inspect parts off machine FAI/FAIB

Memo

0.00

0.00

12/02/15

4

| W/O: |      | WORK ORDER CHANGES |    |      |     |                                     |                          |
|------|------|--------------------|----|------|-----|-------------------------------------|--------------------------|
| DATE | STEP | PROCEDURE CHANGE   | By | Date | Qty | Approval<br>Chief Eng /<br>Prod Mgr | Approval<br>QC Inspector |
|      |      |                    |    |      |     |                                     |                          |
|      |      |                    |    |      |     |                                     |                          |

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

| NCR: |      | WORK ORDER NON-CONFORMANCE (NCR) |                             |                                 |                |                           |                       |                          |
|------|------|----------------------------------|-----------------------------|---------------------------------|----------------|---------------------------|-----------------------|--------------------------|
| DATE | STEP | Description of NC<br>Section A   | Corrective Action Section B |                                 |                | Verification<br>Section C | Approval<br>Chief Eng | Approval<br>QC Inspector |
|      |      |                                  | Initial<br>Chief Eng        | Action Description<br>Chief Eng | Sign &<br>Date |                           |                       |                          |
|      |      |                                  |                             |                                 |                |                           |                       |                          |
|      |      |                                  |                             |                                 |                |                           |                       |                          |
|      |      |                                  |                             |                                 |                |                           |                       |                          |

**NOTE:** Date & initial all entries

# Work Order ID 80126

\*80126\*

Page 2

February-10-12 11:24:57 AM

Item ID: D4354-041

Accept

\*N900040100\*

Setup Start \*NS1\*

Revision ID:

Stop \*NS2\*

Item Name: Bearpaw Wearplate Assembly

Start Date: 10/02/2012 Start Qty: 4.00

\*4\*

Cust Item ID:

Required Date: 24/02/2012 Req'd Qty: 4.00

\*4\*

Customer:

Reference:

Approvals: Process Plan:

Date:

Tooling:

Date:

Run Start \*NR1\*

QC:

Date:

SPC (Y/N):

Date:

Stop \*NR2\*

Sequence ID/  
Work Center ID

Operation  
Description

Set Up/  
Run Hours

Tool ID Tool # Plan Code Accept Qty Reject Qty Reject Number Insp. Stamp

120

QC8- Inspect parts - second check

0.00

\*120\*

QC

Memo

0.00

Quality Control

12.02.16 (4)

130

0.00

\*130\*

Large Fab

Memo

0.00

Large Fab

1- Weld cups as per dwg

A/R S.S. ROD BATCH: M120013

2- Apply hardfacing on wearplate as indicated on dwg

A/R HARDCOAT 2059B BATCH: M120645

156 12-02-22 (2)

140

QC5- Inspect part completeness to step on W/O

0.00

\*140\*

QC

Memo

0.00

Quality Control

12.02.22 (2)

| W/O: |      | WORK ORDER CHANGES |    |      |     |                                     |                          |
|------|------|--------------------|----|------|-----|-------------------------------------|--------------------------|
| DATE | STEP | PROCEDURE CHANGE   | By | Date | Qty | Approval<br>Chief Eng /<br>Prod Mgr | Approval<br>QC Inspector |
|      |      |                    |    |      |     |                                     |                          |
|      |      |                    |    |      |     |                                     |                          |

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

| NCR: |      | WORK ORDER NON-CONFORMANCE (NCR) |                             |                                 |                |                           |                       |                          |
|------|------|----------------------------------|-----------------------------|---------------------------------|----------------|---------------------------|-----------------------|--------------------------|
| DATE | STEP | Description of NC<br>Section A   | Corrective Action Section B |                                 |                | Verification<br>Section C | Approval<br>Chief Eng | Approval<br>QC Inspector |
|      |      |                                  | Initial<br>Chief Eng        | Action Description<br>Chief Eng | Sign &<br>Date |                           |                       |                          |
|      |      |                                  |                             |                                 |                |                           |                       |                          |
|      |      |                                  |                             |                                 |                |                           |                       |                          |
|      |      |                                  |                             |                                 |                |                           |                       |                          |

**NOTE:** Date & initial all entries



**Work Order ID 80126**

February-10-12 11:24:57 AM

**\*80126\***

Page 3

Item ID: D4354-041

Accept

**\*N900040100\***

Setup Start **\*NS1\***

Revision ID:

Stop **\*NS2\***

Item Name: Bearpaw Wearplate Assembly

Start Date: 10/02/2012 Start Qty: 4.00

**\*4\***  
**\*4\*** 2

Cust Item ID:

Required Date: 24/02/2012 Req'd Qty: 4.00

Customer:

Reference:

Approvals:

Process Plan:

Date:

Tooling:

Date:

Run Start **\*NR1\***

QC:

Date:

SPC (Y/N):

Date:

Stop **\*NR2\***

Sequence ID/  
Work Center ID

Operation  
Description

Set Up/  
Run Hours

Tool ID

Tool #

Plan  
Code

Accept  
Qty

Reject  
Qty

Reject  
Number

Insp.  
Stamp

150

QC9- Inspect visual per QSI004- Fusion Welds

0.00

**\*150\***

QC

Memo

0.00

Quality Control

160

Identify as per dwg & Stock Location: shy

0.00

**\*160\***

Packaging

Memo

0.00

Packaging

170

QC21- Final Inspection - Work Order Release

0.00

**\*170\***

QC

Memo

0.00

Quality Control

*Pl 12.02.22*

*2x*

*Ø*

*12/2/23 54 120*

*12/2/23 4*

*mf  
12-02-21*

| W/O: |      | WORK ORDER CHANGES |    |      |     |                                     |                          |
|------|------|--------------------|----|------|-----|-------------------------------------|--------------------------|
| DATE | STEP | PROCEDURE CHANGE   | By | Date | Qty | Approval<br>Chief Eng /<br>Prod Mgr | Approval<br>QC Inspector |
|      |      |                    |    |      |     |                                     |                          |
|      |      |                    |    |      |     |                                     |                          |

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

| NCR: |      | WORK ORDER NON-CONFORMANCE (NCR) |                             |                                 |                |                           |                       |                          |
|------|------|----------------------------------|-----------------------------|---------------------------------|----------------|---------------------------|-----------------------|--------------------------|
| DATE | STEP | Description of NC<br>Section A   | Corrective Action Section B |                                 |                | Verification<br>Section C | Approval<br>Chief Eng | Approval<br>QC Inspector |
|      |      |                                  | Initial<br>Chief Eng        | Action Description<br>Chief Eng | Sign &<br>Date |                           |                       |                          |
|      |      |                                  |                             |                                 |                |                           |                       |                          |
|      |      |                                  |                             |                                 |                |                           |                       |                          |
|      |      |                                  |                             |                                 |                |                           |                       |                          |

**NOTE:** Date & initial all entries

# Picklist Print

February-10-12 11:25:02 AM

Page 1

Work Order ID: 80126

\*80126\*

Parent Item: D4354-041

\*D4354-041\*

Parent Item Name: Bearpaw Wearplate Assembly

Start Date: 10/02/2012

Required Date: 24/02/2012

Start Qty: 4.00

Required Qty: 4.00

Comments: IPP REV:A 11.04.11 NEW ISSUE DD VERF:EC

| Component Item ID/<br>Item Name | Replacement<br>Item ID | Mfg/<br>Purch | Bin<br>Item | Primary<br>Location | Last<br>Location | Route<br>Seq ID | Unit of<br>Measure | Qty on<br>Hand | Qty per Kit | Total<br>Qty | Qty<br>Issued | Date<br>Issued | Status |
|---------------------------------|------------------------|---------------|-------------|---------------------|------------------|-----------------|--------------------|----------------|-------------|--------------|---------------|----------------|--------|
| M304S16GA                       |                        | Purchased     | No          |                     |                  | 100             | sf                 | 58.0000        | 0.9223      | 3.883368     |               |                |        |

\*M304S16GA\*

304/316 Sheet .063

\*\*

W 12 02 13

Location Loc Qty Loc Code

MAT020

58

119653

58

D4379-1

Manufactured

No

130

Each

57.0000

10

40

\*D4379-1\*

Wearplate Cup

\*\*

186 12-02-22

Location Loc Qty Loc Code

WA035

57

72388

57

X20

| W/O: |      | WORK ORDER CHANGES |    |      |     |                                     |                          |
|------|------|--------------------|----|------|-----|-------------------------------------|--------------------------|
| DATE | STEP | PROCEDURE CHANGE   | By | Date | Qty | Approval<br>Chief Eng /<br>Prod Mgr | Approval<br>QC Inspector |
|      |      |                    |    |      |     |                                     |                          |
|      |      |                    |    |      |     |                                     |                          |

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

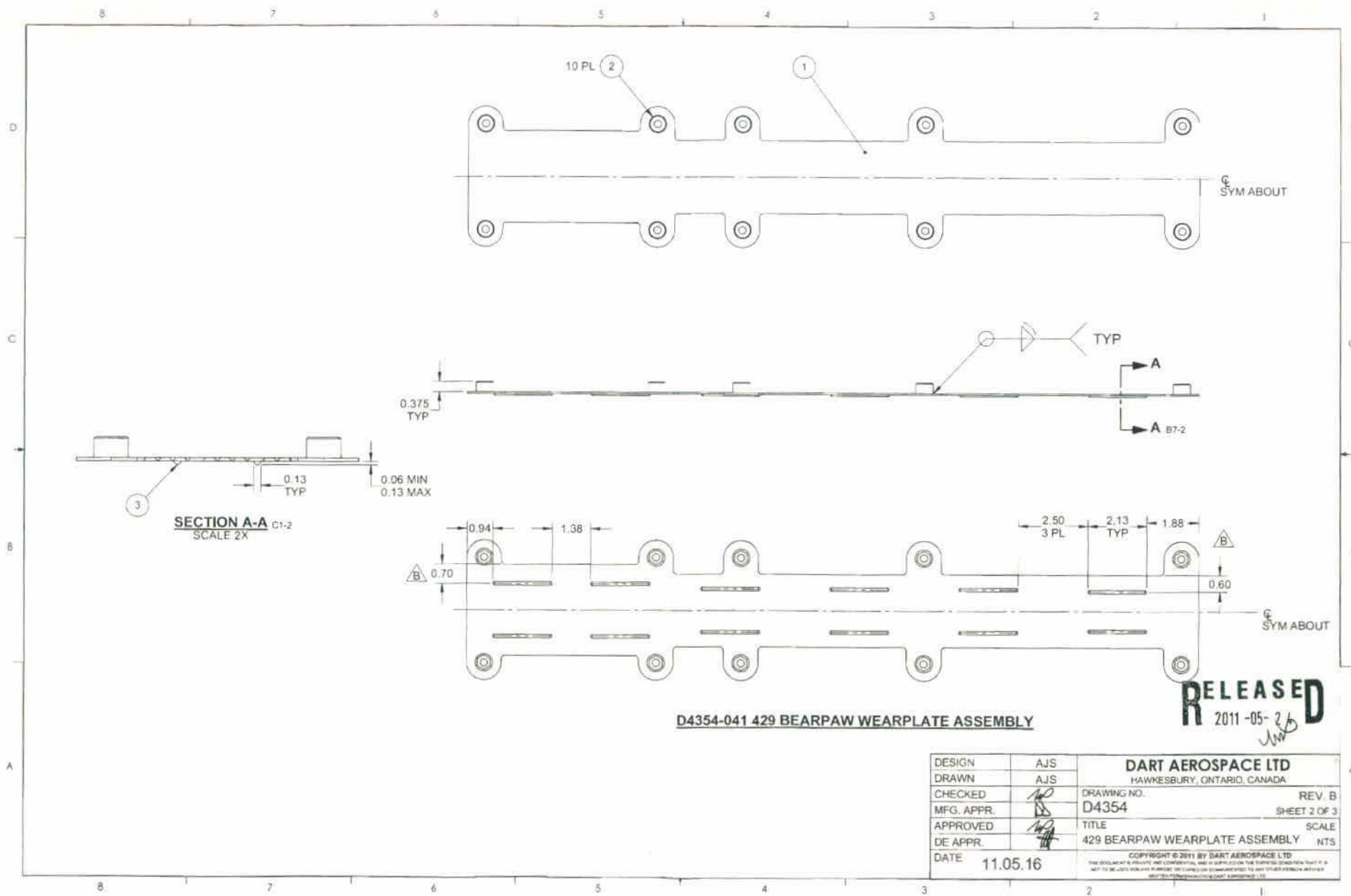
Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

| NCR: |      | WORK ORDER NON-CONFORMANCE (NCR) |                             |                                 |                |                           |                       |                          |
|------|------|----------------------------------|-----------------------------|---------------------------------|----------------|---------------------------|-----------------------|--------------------------|
| DATE | STEP | Description of NC<br>Section A   | Corrective Action Section B |                                 |                | Verification<br>Section C | Approval<br>Chief Eng | Approval<br>QC Inspector |
|      |      |                                  | Initial<br>Chief Eng        | Action Description<br>Chief Eng | Sign &<br>Date |                           |                       |                          |
|      |      |                                  |                             |                                 |                |                           |                       |                          |
|      |      |                                  |                             |                                 |                |                           |                       |                          |
|      |      |                                  |                             |                                 |                |                           |                       |                          |

**NOTE:** Date & initial all entries



80128



RELEASED  
2011-05-26

|            |                    |  |        |
|------------|--------------------|--|--------|
| DESIGN     | AJS                | DART AEROSPACE LTD<br>HAWKESBURY, ONTARIO, CANADA  |        |
| DRAWN      | AJS                |  |        |
| CHECKED    | <i>[Signature]</i> | DRAWING NO.<br>D4354   | REV. B |
| MFG. APPR. | <i>[Signature]</i> | SHEET 2 OF 3   |        |
| APPROVED   | <i>[Signature]</i> | TITLE  | SCALE  |
| DE APPR.   | <i>[Signature]</i> | 429 BEARPAW WEARPLATE ASSEMBLY   | NTS    |
| DATE       | 11.05.16           | COPYRIGHT © 2011 BY DART AEROSPACE LTD<br>THIS DOCUMENT IS UNCLASSIFIED AND IS NOT TO BE RELEASED OR DISCLOSED TO THE PUBLIC OR TO ANY OTHER PERSON OR ENTITY WITHOUT THE WRITTEN PERMISSION OF DART AEROSPACE LTD |        |

| W/O: |      | WORK ORDER CHANGES |    |      |     |                                     |                          |
|------|------|--------------------|----|------|-----|-------------------------------------|--------------------------|
| DATE | STEP | PROCEDURE CHANGE   | By | Date | Qty | Approval<br>Chief Eng /<br>Prod Mgr | Approval<br>QC Inspector |
|      |      |                    |    |      |     |                                     |                          |
|      |      |                    |    |      |     |                                     |                          |

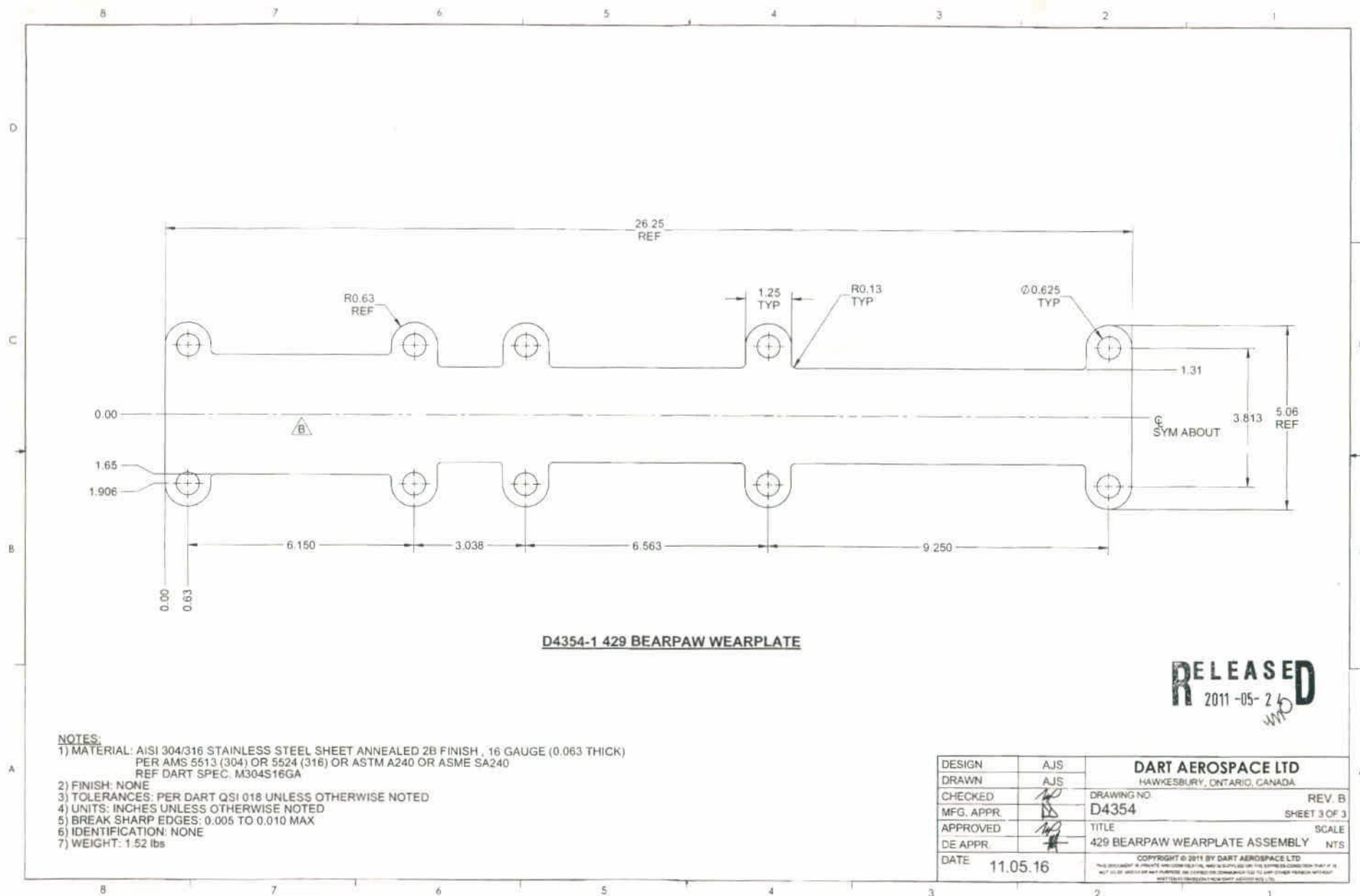
Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

| NCR: |      | WORK ORDER NON-CONFORMANCE (NCR) |                             |                                 |                |                           |                       |                          |
|------|------|----------------------------------|-----------------------------|---------------------------------|----------------|---------------------------|-----------------------|--------------------------|
| DATE | STEP | Description of NC<br>Section A   | Corrective Action Section B |                                 |                | Verification<br>Section C | Approval<br>Chief Eng | Approval<br>QC Inspector |
|      |      |                                  | Initial<br>Chief Eng        | Action Description<br>Chief Eng | Sign &<br>Date |                           |                       |                          |
|      |      |                                  |                             |                                 |                |                           |                       |                          |
|      |      |                                  |                             |                                 |                |                           |                       |                          |
|      |      |                                  |                             |                                 |                |                           |                       |                          |

**NOTE:** Date & initial all entries

80128



| W/O: |      | WORK ORDER CHANGES |    |      |     |                                     |                          |
|------|------|--------------------|----|------|-----|-------------------------------------|--------------------------|
| DATE | STEP | PROCEDURE CHANGE   | By | Date | Qty | Approval<br>Chief Eng /<br>Prod Mgr | Approval<br>QC Inspector |
|      |      |                    |    |      |     |                                     |                          |
|      |      |                    |    |      |     |                                     |                          |

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

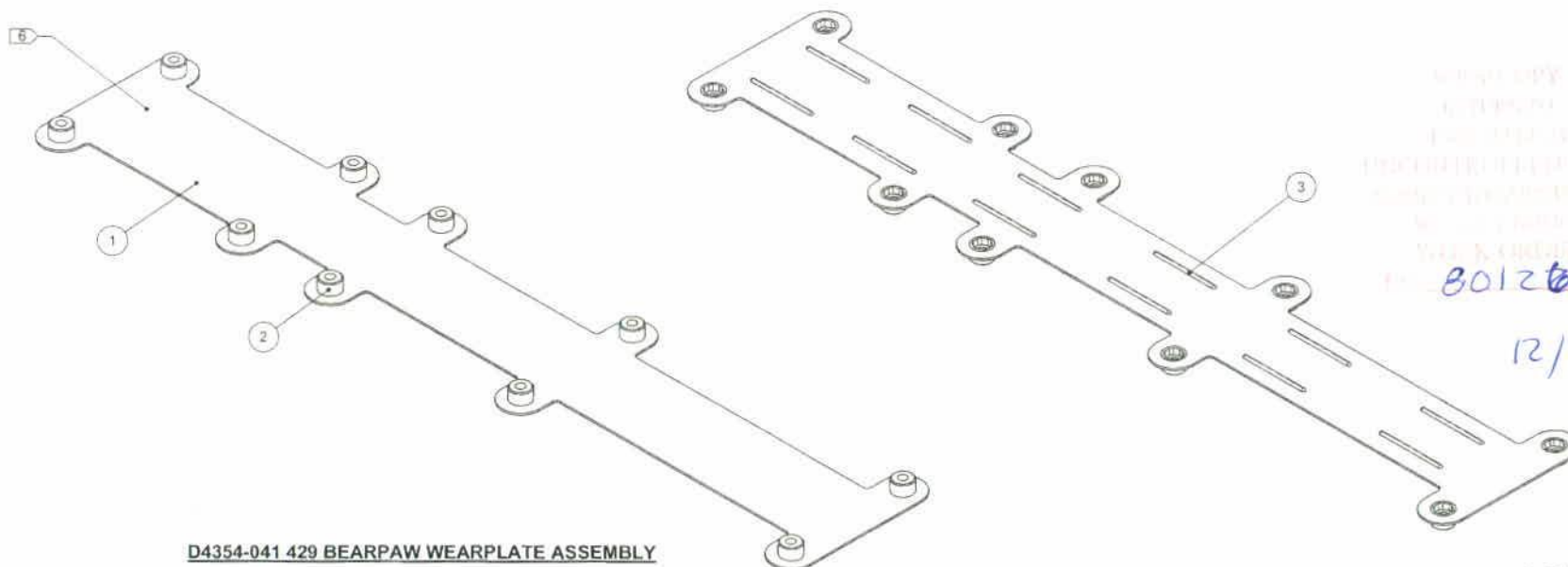
Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

| NCR: |      | WORK ORDER NON-CONFORMANCE (NCR) |                                |                                 |                |                           |                       |                          |
|------|------|----------------------------------|--------------------------------|---------------------------------|----------------|---------------------------|-----------------------|--------------------------|
| DATE | STEP | Description of NC<br>Section A   | Corrective Action<br>Section B |                                 |                | Verification<br>Section C | Approval<br>Chief Eng | Approval<br>QC Inspector |
|      |      |                                  | Initial<br>Chief Eng           | Action Description<br>Chief Eng | Sign &<br>Date |                           |                       |                          |
|      |      |                                  |                                |                                 |                |                           |                       |                          |
|      |      |                                  |                                |                                 |                |                           |                       |                          |
|      |      |                                  |                                |                                 |                |                           |                       |                          |

**NOTE:** Date & initial all entries



| ITEM | QTY | P/N       | DESCRIPTION                    |
|------|-----|-----------|--------------------------------|
|      | X   | D4354-041 | 429 BEARPAW WEARPLATE ASSEMBLY |
| 1    | 1   | D4354-1   | 429 BEARPAW WEARPLATE          |
| 2    | 10  | D4379-1   | WEARPLATE CUP                  |
| 3    | A/R | 2059B     | HARDCOAT                       |



**D4354-041 429 BEARPAW WEARPLATE ASSEMBLY**

**RELEASED**  
2011-05-26

**NOTES:**

- 1) MATERIAL: N/A
- 2) FINISH: NONE
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: IDENTIFY WITH DART P/N "D4354-041" AND B/N "BXXXXX"  
PER DART QSI 044 6.1 (FINE POINT MARKER)
- 7) WEIGHT: 1.76 lbs
- 8) WELDING: PER QSI 004
- 9) 2059B HARDCOAT WELD, 12 PL

| B         | SHT 3 LIGHTENING HOLES DELETED, SHT 2 ZONE B1 & B6 HARDCOAT RELOCATED REASON PROTECTION OF BEARPAW. | AJS   | 11.05.16     |
|-----------|---|---|--------------|
| A         | NEW ISSUE   | AJS   | 11.03.24     |
| REV       | DESCRIPTION   | BY  | DATE         |
| DESIGN    | AJS   | <b>DART AEROSPACE LTD</b><br>KAWKESBURY, ONTARIO, CANADA  |              |
| DRAWN     | AJS   |   |              |
| CHECKED   | <i>[Signature]</i>  | DRAWING NO.   | REV: B       |
| MFG APPR. | <i>[Signature]</i>  | D4354   | SHEET 1 OF 3 |
| APPROVED  | <i>[Signature]</i>  | TITLE   | SCALE        |
| DE APPR.  | <i>[Signature]</i>  | 429 BEARPAW WEARPLATE ASSEMBLY  | NTS          |
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| W/O: |      | WORK ORDER CHANGES |    |      |     |                                     |                          |
|------|------|--------------------|----|------|-----|-------------------------------------|--------------------------|
| DATE | STEP | PROCEDURE CHANGE   | By | Date | Qty | Approval<br>Chief Eng /<br>Prod Mgr | Approval<br>QC Inspector |
|      |      |                    |    |      |     |                                     |                          |
|      |      |                    |    |      |     |                                     |                          |

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

| NCR: |      | WORK ORDER NON-CONFORMANCE (NCR) |                             |                                 |                |                           |                       |                          |
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|      |      |                                  | Initial<br>Chief Eng        | Action Description<br>Chief Eng | Sign &<br>Date |                           |                       |                          |
|      |      |                                  |                             |                                 |                |                           |                       |                          |
|      |      |                                  |                             |                                 |                |                           |                       |                          |
|      |      |                                  |                             |                                 |                |                           |                       |                          |

**NOTE:** Date & initial all entries

|                     |          |             |           |
|---------------------|----------|-------------|-----------|
| Rev                 | Date     | Change      | New Issue |
| 1                   | 12/02/15 |             |           |
| Measured by:        | Date:    | Audited by: | Date:     |
|                     |          |             | 12.02.16  |
| Prototype Approval: | Date:    |             |           |
|                     |          |             |           |

| Drawing | Dimension | Tolerance | Actual | Accept | Reject | Method of Inspection | Comments |
|---------|-----------|-----------|--------|--------|--------|----------------------|----------|
| 26.25   | ±0.30     |           | 26.25  | -      | -      | First 3-02           |          |
| Ø.625   | ±0.06     |           | Ø.624  | -      | -      | Prod W-302           |          |
| 5.06    | ±0.030    |           | 5.05   | -      | -      | "                    |          |
| 3.813   | ±0.010    |           | 3.804  | -      | -      | "                    |          |
| 6.150   | ±0.010    |           | 6.148  | -      | -      | "                    |          |
| 3.038   | ±0.010    |           | 3.036  | -      | -      | "                    |          |
| 6.563   | ±0.010    |           | 6.557  | -      | -      | "                    |          |
| 9.250   | ±0.010    |           | 9.248  | -      | -      | "                    |          |
| 1.65    | ±0.030    |           | 1.646  | -      | -      | "                    |          |
| 1.906   | ±0.010    |           | 1.901  | -      | -      | "                    |          |
| 1.25    | ±0.030    |           | 1.252  | -      | -      | "                    |          |

# FIRST ARTICLE INSPECTION CHECKLIST

|                 |                      |
|-----------------|----------------------|
| Work Order:     | 80126                |
| Part Number:    | 4534-041             |
| Description:    | Boarpuu Wdwpare Assy |
| Inspection Dwg: | 4354                 |
| Rev:            | B                    |
| Page 1 of 1     |                      |